

**To:** Mike Johnson[mike.johnson@copperenv.com]  
**Cc:** anthony.brown@bp.com[anthony.brown@bp.com]; Cohen, Adam[Adam.Cohen@dgsllaw.com]; Dave McCarthy[dave.mccarthy@copperenv.com]; gr@burlesonconsulting.com[gr@burlesonconsulting.com]; Cory Koger[Cory.S.Koger@usace.army.mil]; Wirtschafter, Joshua[Wirtschafter.Joshua@epa.gov]  
**From:** Deschambault, Lynda  
**Sent:** Thur 4/13/2017 3:38:27 PM  
**Subject:** RE: ASB Leviathan 2011 Spring Historical Data and current weekly

Thanks Mike/Tony

Could you provide a summary chart and comparison of flow rates? It would be helpful to have a perspective on the 125 gpm observed on April 6<sup>th</sup> relative to previous high flow years.

And wrap this into one weekly report? On the other weekly just provided I see "Aspen Seep Influent Flow Rate field measurement: 25 gpm" perhaps a graph over time?

The weekly Table 1 includes only HDS discharge, could you please provide a second table with the ASB discharge and indicate exceedences (iron in this case) with highlights as requested?

I look forward to receiving the other ASB chemistry data when available

In general, any time Adam Cohen is copied, please also copy our legal Counsel: Josh Wirtschafter.

Lynda

**From:** Mike Johnson [mailto:mike.johnson@copperenv.com]  
**Sent:** Wednesday, April 12, 2017 8:04 PM  
**To:** Deschambault, Lynda <Deschambault.Lynda@epa.gov>  
**Cc:** anthony.brown@bp.com; Cohen, Adam <Adam.Cohen@dgsllaw.com>; Dave McCarthy <dave.mccarthy@copperenv.com>; gr@burlesonconsulting.com  
**Subject:** Leviathan 2011 Spring Historical Data

Lynda,

We have been looking at the ASB Treatment System data from 2011 to help us understand how the Aspen Seep Bioreactor reacted during a previous high flow year. In looking at the effluent water quality along with flow rate, it appears that Iron was in exceedance during the spring of 2011 until late May when flows started trending down and temperatures started trending up. It was a similar occurrence to last month, where Iron was in exceedance, but the other analytes were within effluent discharge criteria. We will continue to make adjustments as necessary to fine tune the water treatment until we can gain equilibrium within the bioreactor and the flows begin to trend down.

Thanks,

Mike Johnson, PE

Senior Engineer

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